

116TH CONGRESS }      HOUSE OF REPRESENTATIVES    {      REPORT  
    *1st Session*    116–288

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PROTECT AND RESTORE AMERICA'S ESTUARIES ACT

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NOVEMBER 13, 2019.—Committed to the Committee of the Whole House on the State of the Union and ordered to be printed

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Mr. DEFAZIO, from the Committee on Transportation and Infrastructure, submitted the following

R E P O R T

[To accompany H.R. 4044]

[Including cost estimate of the Congressional Budget Office]

The Committee on Transportation and Infrastructure, to whom was referred the bill (H.R. 4044) to amend the Federal Water Pollution Control Act to reauthorize the National Estuary Program, and for other purposes, having considered the same, report favorably thereon without amendment and recommend that the bill do pass.

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PURPOSE OF LEGISLATION

The purpose of H.R. 4044 is to amend section 320 of the Federal Water Pollution Control Act (the Clean Water Act) to reauthorize

Federal appropriations for the National Estuary Program (NEP) within the Environmental Protection Agency (EPA) through fiscal year 2026.

#### BACKGROUND AND NEED FOR LEGISLATION

The Clean Water Act defines an estuary (and estuarine zones) as all or part of the mouth of a river or stream or other body of water having an unimpaired natural connection with open sea where freshwater from rivers or streams mixes with salt water from the ocean.<sup>1</sup> Estuarine environments are unique and highly productive ecosystems critical to the ecological and economic well-being of the Nation's coastal areas.

A healthy estuarine system has a lot relying on it. This includes industries that represent the economic centers for jobs and commerce in coastal states, such as fishing, recreation, and tourism. They also provide natural areas for ports and harbors to support these industries as well as general shipping and transportation.

A diverse range of flora, fauna, birds, fish and other wildlife also depend on estuaries. These areas provide habitat, spawning and nesting grounds, and nutrients for the ecosystem. Humans rely on estuaries for all these functions as well as for natural water filtration and flood prevention and resiliency benefits.

Despite these inherent values, EPA recognizes that estuaries in the United States are under severe stress. The impacts of human development and increased pollution cascade throughout the ecosystem and watershed—from erosion and water quality hazards to declines in species' populations. Ongoing threats to estuaries include shoreline erosion and damage to infrastructure, excessive nutrient contamination which may result in outbreaks of harmful algal blooms, and accelerated land loss.

Recognizing the importance of estuaries and all their myriad functions, Congress created the National Estuary Program (NEP) in 1987 under section 320 of the Clean Water Act. The NEP authorizes States to nominate, and EPA to identify, estuaries across the country that may require comprehensive restoration planning and long-term protection strategies.

The NEP aims to address water quality problems in, and promote the ecological integrity of, estuaries. This is achieved through the convening of a management conference compromised of Federal, state, and local government officials, as well as local citizens, businessowners, educators, researchers, and other interested stakeholders. The management conference is responsible for the development and implementation of locally-developed estuary management plans, called Comprehensive Conservation and Management Plans (CCMPs). The CCMP recommends targeted actions specific to the estuary's watershed, with a science-driven and consensus-based approach. This collaborative process has been successful nationwide and has led to the restoration or protection of more than two million acres since 2000.

The United States has about 130 estuaries; however only 28 estuaries are currently approved to receive Federal assistance under the NEP. Appropriated funds are split evenly across all 28 programs, with a portion also going to a separate grant program. The

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<sup>1</sup> See Section 104(n)(1) of the Federal Water Pollution Control Act (33 U.S.C. 1251(n)(4)).

program was created in a 2016 reauthorization, offering competitive grant awards for recipients working to address issues threatening estuaries and their surrounding coastal areas.

In 2016, Congress reauthorized section 320 of the Clean Water Act through fiscal year 2021 (P.L. 114–162). Section 320 of the Clean Water Act most recently authorized the NEP at \$26.5 million per year. Federally authorized levels have been as high as \$35 million per year in past authorizations, and current appropriated levels have consistently exceeded the 2016 authorized level. The authorization of these funds will expire in fiscal year 2021.

#### HEARINGS

For the purposes of section 103(i) of H. Res. 6 of the 116th Congress, the following hearing was used to develop or consider H.R. 4044:

On June 25, 2019, the Subcommittee on Water Resources and Environment held a hearing, titled, “Protecting and Restoring America’s Iconic Waters.” The Subcommittee received testimony from: Preston D. Cole, Secretary, Wisconsin Department of Natural Resources; Dave Pine, Supervisor, District 1, San Mateo County Board of Supervisors, Chair of the San Francisco Bay Restoration Authority Governing Board; Laura Blackmore, Executive Director, Puget Sound Partnership; William C. Baker, President, Chesapeake Bay Foundation; Kristi Trail, Executive Director, Lake Pontchartrain Basin Foundation; and Tom Ford, Director, Santa Monica Bay National Estuary Program, The Bay Foundation. Topics discussed at the hearing include the importance of reauthorizing increased Federal appropriations for EPA’s National Estuaries Program to assist states and communities to leverage additional funding for the restoration and preservation of estuaries throughout the country.

#### LEGISLATIVE HISTORY AND CONSIDERATION

H.R. 4044 was introduced on July 25, 2019, by Mr. Malinowski, Mrs. Fletcher, and Mr. Graves of Louisiana and referred to the Committee on Transportation and Infrastructure. Within the Committee, H.R. 4044 was referred to the Subcommittee on Water Resources and Environment.

The Chair discharged the Subcommittee on Water Resources and Environment from further consideration of H.R. 4044 on September 19, 2019.

The Committee met in open session to consider H.R. 4044 on September 19, 2019, and ordered the measure to be reported to the House with a favorable recommendation, without amendment, by voice vote, a quorum being present.

#### COMMITTEE VOTES

Clause 3(b) of rule XIII of the Rules of the House of Representatives requires each committee report to include the total number of votes cast for and against on each record vote on a motion to report and on any amendment offered to the measure or matter, and the names of those members voting for and against.

There were no recorded votes taken in connection with consideration of H.R. 4044.

### COMMITTEE OVERSIGHT FINDINGS

With respect to the requirements of clause 3(c)(1) of rule XIII of the Rules of the House of Representatives, the Committee's oversight findings and recommendations are reflected in this report.

#### NEW BUDGET AUTHORITY AND TAX EXPENDITURES

Clause 3(c)(2) of rule XIII of the Rules of the House of Representatives does not apply where a cost estimate and comparison prepared by the Director of the Congressional Budget Office under section 402 of the Congressional Budget Act of 1974 has been timely submitted prior to the filing of the report and is included in the report. Such a cost estimate is included in this report.

#### CONGRESSIONAL BUDGET OFFICE COST ESTIMATE

With respect to the requirement of clause 3(c)(3) of rule XIII of the Rules of the House of Representatives and section 402 of the Congressional Budget Act of 1974, the Committee has received the enclosed cost estimate for H.R. 4044 from the Director of the Congressional Budget Office:

U.S. CONGRESS,  
CONGRESSIONAL BUDGET OFFICE,  
*Washington, DC, October 2, 2019.*

Hon. PETER A. DEFAZIO,  
*Chairman, Committee on Transportation and Infrastructure,  
House of Representatives, Washington, DC.*

DEAR MR. CHAIRMAN: The Congressional Budget Office has prepared the enclosed cost estimate for H.R. 4044, the Protect and Restore America's Estuaries Act.

If you wish further details on this estimate, we will be pleased to provide them. The CBO staff contact is Stephen Rabent.

Sincerely,

PHILLIP L. SWAGEL,  
*Director.*

Enclosure.

<b>H.R. 4044, Protect and Restore America's Estuaries Act</b>			
As ordered reported by the House Committee on Transportation and Infrastructure on September 20, 2019			
By Fiscal Year, Millions of Dollars	2020	2020-2024	2020-2029
<b>Direct Spending (Outlays)</b>	0	0	0
<b>Revenues</b>	0	0	0
<b>Increase or Decrease (-) in the Deficit</b>	0	0	0
<b>Spending Subject to Appropriation (Outlays)</b>	-17	70	197
Statutory pay-as-you-go procedures apply?	No	<b>Mandate Effects</b>	
Increases on-budget deficits in any of the four consecutive 10-year periods beginning in 2030?	No	Contains intergovernmental mandate?	No
		Contains private-sector mandate?	No

Under current law \$26.5 million is authorized to be appropriated in 2020 and 2021 for the Environmental Protection Agency's (EPA's) National Estuary Program. The bill would eliminate those authorizations, but would authorize the appropriation of \$50 million a year over the 2022–2026 period for the program.

Under the National Estuary Program, EPA designates national estuaries and establishes a management conference that implements conservation and management plan for estuaries. EPA provides grants and makes competitive awards to aid implementation of those plans. The Congress appropriated \$27 million in 2019 for those purposes. H.R. 4044 would add several new areas to a list of regions that EPA is required to give priority consideration to under the program, expand the selection criteria for competitive awards, and expand the purpose of management conferences to include addressing the effects of extreme weather events and increasing public education on the conditions of the estuary.

Assuming appropriation action consistent with the bill and based on historical spending patterns, CBO estimates that implementing the bill would cost \$70 million over the 2020–2024 period and \$127 million after 2024. The costs of the legislation, detailed in Table 1, fall within budget function 300 (natural resources and environment).

TABLE 1.—ESTIMATED BUDGETARY EFFECTS OF H.R. 4044

	By fiscal year, millions of dollars—											
	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2020–2024	2020–2029
<b>Increases or Decreases (–) in Spending Subject to Appropriation</b>												
Estimated Authorizations .....	–26	–26	50	50	50	50	50	0	0	0	97	197
Estimated Outlays .....	–17	–23	25	39	46	50	50	18	8	3	70	197

The CBO staff contact for this estimate is Stephen Rabent. The estimate was reviewed by H. Samuel Papenfuss, Deputy Assistant Director for Budget Analysis.

#### PERFORMANCE GOALS AND OBJECTIVES

With respect to the requirement of clause 3(c)(4) of rule XIII of the rules of the House of Representatives, the performance goal and objective of this legislation is to reauthorize Federal appropriations for EPA's National Estuary Program, and to provide Federal resources to protect and restore the water quality and ecological integrity of estuaries of national significance.

#### DUPLICATION OF FEDERAL PROGRAMS

Pursuant to clause 3(c)(5) of rule XIII of the Rules of the House of Representatives, the Committee finds that no provision of H.R. 4044 establishes or reauthorizes a program of the federal government known to be duplicative of another federal program, a program that was included in any report from the Government Accountability Office to Congress pursuant to section 21 of Public Law 111–139, or a program related to a program identified in the most recent Catalog of Federal Domestic Assistance.

**CONGRESSIONAL EARMARKS, LIMITED TAX BENEFITS, AND LIMITED TARIFF BENEFITS**

In compliance with clause 9 of rule XXI of the Rules of the House of Representatives, this bill, as reported, contains no congressional earmarks, limited tax benefits, or limited tariff benefits as defined in clause 9(e), 9(f), or 9(g) of the rule XXI.

**FEDERAL MANDATES STATEMENT**

The Committee adopts as its own the estimate of federal mandates prepared by the Director of the Congressional Budget Office pursuant to section 423 of the Unfunded Mandates Reform Act (Public Law 104–4).

**PREEMPTION CLARIFICATION**

Section 423 of the Congressional Budget Act of 1974 requires the report of any Committee on a bill or joint resolution to include a statement on the extent to which the bill or joint resolution is intended to preempt state, local, or tribal law. The Committee finds that H.R. 4044 does not preempt any state, local, or tribal law.

**ADVISORY COMMITTEE STATEMENT**

No advisory committees within the meaning of section 5(b) of the Federal Advisory Committee Act were created by this legislation.

**APPLICABILITY TO LEGISLATIVE BRANCH**

The Committee finds that the legislation does not relate to the terms and conditions of employment or access to public services or accommodations within the meaning of section 102(b)(3) of the Congressional Accountability Act (Public Law 104–1).

**SECTION-BY-SECTION ANALYSIS OF THE LEGISLATION**

*Sec. 1. Title*

This section provides that this bill may be cited as the “Protect and Restore America’s Estuaries Act”.

*Sec. 2. Management conference*

This section amends section 320(a)(2)(B) of the Clean Water Act to codify all existing estuary restoration programs currently recognized by the Administrator of EPA.

*Sec. 3. Purposes of conference*

This section amends section 320(b)(4) of the Clean Water Act to include additional factors for consideration by the management conference when each NEP updates its comprehensive conservation and management plan.

Subparagraph (A) maintains existing law for what the plan should include in its recommendations.

Subparagraph (B) requires future comprehensive conservation and management plans to address the effects of recurring extreme weather events on the estuary. It also requires future plans to identify and assess vulnerabilities specific to the estuary and develop and implement corresponding adaptation strategies.

Subparagraph (C) requires that future comprehensive conservation and management plans identify actions that can increase public education and awareness of the ecological health and water quality conditions of the estuary.

*Sec. 4. Members of conference*

This section amends section 320(c)(5) of the Clean Water Act to insert “nonprofit organizations” as an eligible member of a management conference convened under section 320(a).

*Sec. 5. Grants*

This section amends section 320(g)(4)(C) to expand the type of projects eligible for selection as recipients for grants under section 320(g). Under this provision, NEP funding would be specifically authorized to address: (1) “emerging” issues that threaten the ecological and economic well-being of estuaries; (2) issues related to coastal resiliency; (3) stormwater runoff; and (4) accelerated land loss. This section would also clarify that projects to address extreme weather events would be eligible for the consideration of award recipients.

*Sec. 6. Authorization of appropriations*

This section authorizes appropriations of \$50 million annually through fiscal year 2026.

CHANGES IN EXISTING LAW MADE BY THE BILL, AS REPORTED

In compliance with clause 3(e) of rule XIII of the Rules of the House of Representatives, changes in existing law made by the bill, as reported, are shown as follows (existing law proposed to be omitted is enclosed in black brackets, new matter is printed in italic, and existing law in which no change is proposed is shown in roman):

**FEDERAL WATER POLLUTION CONTROL ACT**

\* \* \* \* \*

**TITLE III—STANDARDS AND ENFORCEMENT**

\* \* \* \* \*

**SEC. 320. NATIONAL ESTUARY PROGRAM.**

(a) MANAGEMENT CONFERENCE.—

(1) NOMINATION OF ESTUARIES.—The Governor of any State may nominate to the Administrator an estuary lying in whole or in part within the State as an estuary of national significance and request a management conference to develop a comprehensive management plan for the estuary. The nomination shall document the need for the conference, the likelihood of success, and information relating to the factors in paragraph (2).

(2) CONVENING OF CONFERENCE.—

(A) IN GENERAL.—In any case where the Administrator determines, on his own initiative or upon nomination of a State under paragraph (1), that the attainment or maintenance of that water quality in an estuary which assures

protection of public water supplies and the protection and propagation of a balanced, indigenous population of shellfish, fish, and wildlife, and allows recreational activities, in and on the water, requires the control of point and nonpoint sources of pollution to supplement existing controls of pollution in more than one State, the Administrator shall select such estuary and convene a management conference.

(B) PRIORITY CONSIDERATION.—The Administrator shall give priority consideration under this section to Long Island Sound, New York and Connecticut; Narragansett Bay, Rhode Island; Buzzards Bay, Massachusetts; Massachusetts Bay, Massachusetts (including Cape Cod Bay and Boston Harbor); Puget Sound, Washington; New York-New Jersey Harbor, New York and New Jersey; Delaware Bay, Delaware and New Jersey; Delaware Inland Bays, Delaware; Albemarle Sound, North Carolina; Sarasota Bay, Florida; San Francisco Bay, California; Santa Monica Bay, California; Galveston Bay, Texas; Barataria-Terrebonne Bay estuary complex, Louisiana; Indian River Lagoon, Florida; Lake Pontchartrain Basin, Louisiana and Mississippi; [and Peconic Bay, New York] Peconic Bay, New York; Casco Bay, Maine; Tampa Bay, Florida; Coastal Bend, Texas; San Juan Bay, Puerto Rico; Tillamook Bay, Oregon; Piscataqua Region, New Hampshire; Barnegat Bay, New Jersey; Maryland Coastal Bays, Maryland; Charlotte Harbor, Florida; Mobile Bay, Alabama; Morro Bay, California; and Lower Columbia River, Oregon and Washington.

(3) BOUNDARY DISPUTE EXCEPTION.—In any case in which a boundary between two States passes through an estuary and such boundary is disputed and is the subject of an action in any court, the Administrator shall not convene a management conference with respect to such estuary before a final adjudication has been made of such dispute.

(b) PURPOSES OF CONFERENCE.—The purposes of any management conference convened with respect to an estuary under this subsection shall be to—

(1) assess trends in water quality, natural resources, and uses of the estuary;

(2) collect, characterize, and assess data on toxics, nutrients, and natural resources within the estuarine zone to identify the causes of environmental problems;

(3) develop the relationship between the in-place loads and point and nonpoint loadings of pollutants to the estuarine zone and the potential uses of the zone, water quality, and natural resources;

(4) develop a comprehensive conservation and [management plan that recommends] management plan that—

(A) recommends priority corrective actions and compliance schedules addressing point and nonpoint sources of pollution to restore and maintain the chemical, physical, and biological integrity of the estuary, including restoration and maintenance of water quality, a balanced indigenous population of shellfish, fish and wildlife, and rec-

reational activities in the estuary, and assure that the designated uses of the estuary are protected;

(B) addresses the effects of recurring extreme weather events on the estuary, including the identification and assessment of vulnerabilities in the estuary and the development and implementation of adaptation strategies; and

(C) increases public education and awareness of the ecological health and water quality conditions of the estuary;

(5) develop plans for the coordinated implementation of the plan by the States as well as Federal and local agencies participating in the conference;

(6) monitor the effectiveness of actions taken pursuant to the plan; and

(7) review all Federal financial assistance programs and Federal development projects in accordance with the requirements of Executive Order 12372, as in effect on September 17, 1983, to determine whether such assistance program or project would be consistent with and further the purposes and objectives of the plan prepared under this section.

For purposes of paragraph (7), such programs and projects shall not be limited to the assistance programs and development projects subject to Executive Order 12372, but may include any programs listed in the most recent Catalog of Federal Domestic Assistance which may have an effect on the purposes and objectives of the plan developed under this section.

(c) MEMBERS OF CONFERENCE.—The members of a management conference convened under this section shall include, at a minimum, the Administrator and representatives of—

(1) each State and foreign nation located in whole or in part in the estuarine zone of the estuary for which the conference is convened;

(2) international, interstate, or regional agencies or entities having jurisdiction over all or a significant part of the estuary;

(3) each interested Federal agency, as determined appropriate by the Administrator;

(4) local governments having jurisdiction over any land or water within the estuarine zone, as determined appropriate by the Administrator; and

(5) affected industries, public and private educational institutions, *nonprofit organizations*, and the general public, as determined appropriate by the Administrator.

(d) UTILIZATION OF EXISTING DATA.—In developing a conservation and management plan under this section, the management conference shall survey and utilize existing reports, data, and studies relating to the estuary that have been developed by or made available to Federal, interstate, State, and local agencies.

(e) PERIOD OF CONFERENCE.—A management conference convened under this section shall be convened for a period not to exceed 5 years. Such conference may be extended by the Administrator, and if terminated after the initial period, may be reconvened by the Administrator at any time thereafter, as may be necessary to meet the requirements of this section.

(f) APPROVAL AND IMPLEMENTATION OF PLANS.—

(1) APPROVAL.—Not later than 120 days after the completion of a conservation and management plan and after providing for public review and comment, the Administrator shall approve such plan if the plan meets the requirements of this section and the affected Governor or Governors concur.

(2) IMPLEMENTATION.—Upon approval of a conservation and management plan under this section, such plan shall be implemented. Funds authorized to be appropriated under titles II and VI and section 319 of this Act may be used in accordance with the applicable requirements of this Act to assist States with the implementation of such plan.

(g) GRANTS.—

(1) RECIPIENTS.—The Administrator is authorized to make grants to State, interstate, and regional water pollution control agencies and entities, State coastal zone management agencies, interstate agencies, other public or nonprofit private agencies, institutions, organizations, and individuals.

(2) PURPOSES.—Grants under this subsection shall be made to pay for activities necessary for the development and implementation of a comprehensive conservation and management plan under this section.

(3) FEDERAL SHARE.—The Federal share of a grant to any person (including a State, interstate, or regional agency or entity) under this subsection for a fiscal year—

(A) shall not exceed—

(i) 75 percent of the annual aggregate costs of the development of a comprehensive conservation and management plan; and

(ii) 50 percent of the annual aggregate costs of the implementation of the plan; and

(B) shall be made on condition that the non-Federal share of the costs are provided from non-Federal sources.

(4) COMPETITIVE AWARDS.—

(A) IN GENERAL.—Using the amounts made available under subsection (i)(2)(B), the Administrator shall make competitive awards under this paragraph.

(B) APPLICATION FOR AWARDS.—The Administrator shall solicit applications for awards under this paragraph from State, interstate, and regional water pollution control agencies and entities, State coastal zone management agencies, interstate agencies, other public or nonprofit private agencies, institutions, organizations, and individuals.

(C) SELECTION OF RECIPIENTS.—In selecting award recipients under this paragraph, the Administrator shall select recipients that are best able to address urgent, *emerging*, and challenging issues that threaten the ecological and economic well-being of coastal areas *or that relate to coastal resiliency*. Such issues shall include—

(i) extensive seagrass habitat losses resulting in significant impacts on fisheries and water quality;

(ii) recurring harmful algae blooms;

(iii) unusual marine mammal mortalities;

(iv) invasive exotic species that may threaten wastewater systems and cause other damage;

- (v) jellyfish proliferation limiting community access to water during peak tourism seasons;
- (vi) stormwater runoff;
- (vii) accelerated land loss;
- [(vi)] (viii) flooding that may be related to sea level rise, extreme weather, or wetland degradation or loss; and
- [(vii)] (ix) low dissolved oxygen conditions in estuarine waters and related nutrient management.

(h) GRANT REPORTING.—Any person (including a State, interstate, or regional agency or entity) that receives a grant under subsection (g) shall report to the Administrator not later than 18 months after receipt of such grants and biennially thereafter on the progress being made under this section.

(i) AUTHORIZATION OF APPROPRIATIONS.—

(1) IN GENERAL.—There is authorized to be appropriated to the Administrator [\$26,500,000 for each of fiscal years 2017 through 2021] \$50,000,000 for each of fiscal years 2022 through 2026 for—

- (A) expenses relating to the administration of grants or awards by the Administrator under this section, including the award and oversight of grants and awards, except that such expenses may not exceed 5 percent of the amount appropriated under this subsection for a fiscal year; and
- (B) making grants and awards under subsection (g).

(2) ALLOCATIONS.—

(A) CONSERVATION AND MANAGEMENT PLANS.—Not less than 80 percent of the amount made available under this subsection for a fiscal year shall be used by the Administrator to provide grant assistance for the development, implementation, and monitoring of each of the conservation and management plans eligible for grant assistance under subsection (g)(2).

(B) COMPETITIVE AWARDS.—Not less than 15 percent of the amount made available under this subsection for a fiscal year shall be used by the Administrator for making competitive awards described in subsection (g)(4).

(j) RESEARCH.—

(1) PROGRAMS.—In order to determine the need to convene a management conference under this section or at the request of such a management conference, the Administrator shall coordinate and implement, through the National Marine Pollution Program Office and the National Marine Fisheries Service of the National Oceanic and Atmospheric Administration, as appropriate, for one or more estuarine zones—

(A) a long-term program of trend assessment monitoring measuring variations in pollutant concentrations, marine ecology, and other physical or biological environmental parameters which may affect estuarine zones, to provide the Administrator the capacity to determine the potential and actual effects of alternative management strategies and measures;

(B) a program of ecosystem assessment assisting in the development of (i) baseline studies which determine the state of estuarine zones and the effects of natural and an-

thropogenic changes, and (ii) predictive models capable of translating information on specific discharges or general pollutant loadings within estuarine zones into a set of probable effects on such zones;

(C) a comprehensive water quality sampling program for the continuous monitoring of nutrients, chlorine, acid precipitation dissolved oxygen, and potentially toxic pollutants (including organic chemicals and metals) in estuarine zones, after consultation with interested State, local, interstate, or international agencies and review and analysis of all environmental sampling data presently collected from estuarine zones; and

(D) a program of research to identify the movements of nutrients, sediments and pollutants through estuarine zones and the impact of nutrients, sediments, and pollutants on water quality, the ecosystem, and designated or potential uses of the estuarine zones.

(2) REPORTS.—The Administrator, in cooperation with the Administrator of the National Oceanic and Atmospheric Administration, shall submit to the Congress no less often than biennially a comprehensive report on the activities authorized under this subsection including—

(A) a listing of priority monitoring and research needs;  
(B) an assessment of the state and health of the Nation's estuarine zones, to the extent evaluated under this subsection;

(C) a discussion of pollution problems and trends in pollutant concentrations with a direct or indirect effect on water quality, the ecosystem, and designated or potential uses of each estuarine zone, to the extent evaluated under this subsection; and

(D) an evaluation of pollution abatement activities and management measures so far implemented to determine the degree of improvement toward the objectives expressed in subsection (b)(4) of this section.

(k) DEFINITIONS.—For purposes of this section, the terms "estuary" and "estuarine zone" have the meanings such terms have in section 104(n)(4) of this Act, except that the term "estuarine zone" shall also include associated aquatic ecosystems and those portions of tributaries draining into the estuary up to the historic height of migration of anadromous fish or the historic head of tidal influence, whichever is higher.

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